NERRS Estuaries 101 Middle School Curriculum
Activity 8: Sharks in the Estuary
Next Generation Science Standards (NGSS) Alignment

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 6-8 builds on K-5 experiences and progresses to evaluating the merit and validity of ideas and methods. • Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. *Students, working in teams or individually, will write letters/emails to local, state, national, and international leaders about the need for shark conservation; students will create posters to hang around the school and community that inform the public of the need for shark conservation; students will start a fundraiser to raise money for shark conservation at their school.* [Taking it Further Extension]	**LS4.C: Adaptation** • Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions. Traits that support successful survival and reproduction in the new environment become more common; those that do not become less common. Thus, the distribution of traits in a population changes. (MS-LS4-6) *Students will identify the key characteristics of a shark that differentiates it from other fish**;** students will examine different shark species to compare and contrast body features and adaptations; students will correlate different shark body features to specific environmental needs.*	**Cause and Effect** • Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability. (MS-LS4-6) *Students learn that the anatomy of a shark is directly related to the habitat in which it lives.*

Alignment to Elementary Grade 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). • Construct an argument with evidence. (3-LS4-3) *Students will consider the different body features of the sharks to determine the sharks behavior and habitat. Students, working in teams or individually, will write letters/emails to local, state, national, and international leaders about the need for shark conservation; students will create posters to hang around the school and community that inform the public of the need for shark conservation; students will start a fundraiser to raise money for shark conservation at their school.* [Taking it Further Extension]	**LS4.C: Adaptation** • For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3) *Students will identify the key characteristics of a shark that differentiates it from other fish**;** students will examine different shark species to compare and contrast body features and adaptations; students will correlate different shark body features to specific environmental needs.*	**Cause and Effect** • Cause and effect relationships are routinely identified and used to explain change. (3-LS4-3) *Students learn that the anatomy of a shark is directly related to the habitat in which it lives.*